



THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Re: Appeal to the Board of Appeals

In re Application of

ISAK et al.

Serial No. 09/787,613

Filed: March 20, 2001

For: PROCESS FOR DRYING PHENOXYMETHYLBENZOIC ACIDS

To: Hon. Commissioner of Patents and Trademarks

**MAIL STOP Appeal Brief-Patents**

Art Unit: 1624

Examiner: Tucker

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20036, on:

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1. ☐ **NOTICE OF APPEAL:** Applicant hereby appeals to the Board of Appeals from the decision dated \_\_\_\_ of the Primary Examiner rejecting claims \_\_ two times previously and identically.
2. ☐ A check in the amount of \$\_\_ is attached to cover the required extension of time fee.
3. ☒ **BRIEF** on appeal in this application is transmitted herewith.
4. ☐ An Oral Hearing is requested.  
☐ The Oral Hearing fee of \$280.00 is enclosed.
5. ☒ Fee \$320.00  
☒ Enclosed
6. ☒ The Commissioner is hereby authorized to charge any fees which may be further required, or credit any over payment to Account No. 11-0345. A duplicate copy of this sheet is attached.

Respectfully submitted,  
KEIL & WEINKAUF

By

David C. Liechty  
Reg. No. 48,692

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

ISAK et al.

Serial No. 09/787,613

Filed: March 20, 2001

For: A PROCESS FOR DRYING PHENOXYMETHYLBENZOIC ACIDS

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Art Unit: 1623

Examiner: Tucker, Zachary

BRIEF ON APPEAL

Sir:

This appeal is from the examiner's rejection of June 13, 2003.

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REAL PARTY IN INTEREST

The real party in interest is BASF Aktiengesellschaft of Ludwigshafen, Germany.

Reel 011693, Frame 0706, recorded on March 20, 2001.

RELATED APPEALS AND INTERFERENCES

To appellants' knowledge and belief, there are no interferences or other appeals which will directly affect or be directly affected by or have a bearing on the Board's decision in this application.

STATUS OF CLAIMS

Claims 1-4 remain in the application and stand twice rejected under 35 USC

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§102(b) as being anticipated by Bloom et al. (US 3,420,851). These claims also stand rejected under 35 USC §112, ¶2.

#### STATUS OF AMENDMENTS

No amendment after the last rejection has been filed.

#### SUMMARY OF INVENTION

The present claims are drawn to a process for drying water and/or solvent-wet phenoxyethylbenzoic acids at a temperature which is from 1 to 25°C higher than the relevant melting point under the employed reaction conditions.

#### ISSUES

Whether claims 1-4 are anticipated by the disclosure of Bloom et al. (US 3,420,851), and whether claims 1-4 are indefinite under 35 USC §112, ¶2.

#### GROUPING OF CLAIMS

Claim 1 is independent, and claims 2-4 depend therefrom.

#### ARGUMENTS

The following legal authority is relied on in the following arguments:  
*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir.

1987).

REJECTION UNDER 35 USC §102(B)

The examiner has rejected claims 1-4 under 35 USC §102(b), based on the disclosure of Bloom et al. To anticipate a claim, each and every element as set forth in the claim must be found, either expressly or inherently described, in the prior art reference (*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987)). The examiner relies on a theory of inherency to show that Bloom teaches the drying process presently claimed (paper 12, pp.2-3). To show that one of skill in the art would necessarily view the cited reference to teach this drying step, the examiner relies on J. Zubrick, The Melting Point Experiment, in *The Organic Chem Lab Survival Manual: A Student's Guide to Techniques*, 4th ed., pp.101-119, John Wiley & Sons, Inc., New York (1997). Applicants do not agree that the presently claimed process is inherently disclosed in Bloom.

Example I of Bloom is the basis for the examiner's analysis, and discloses production of 2-phenoxyethylbenzoic acid. The reaction product is extracted with benzene, the resulting extract is washed with water and dried using anhydrous sodium sulfate, and the benzene is then evaporated (col.11:72-col.12:24). It is noteworthy that Bloom considers the product to have been "dried [using] anhydrous sodium sulfate" (col.12:23-24). Bloom reports that after evaporation of the benzene,

There is obtained 8.9 g. of 2-phenoxyethylbenzoic acid, M.P., 118-122 degrees C. A more highly purified material, M.P., 125.5-126.5 degrees

C., is obtained after recrystallization from ethanol.  
(col.12:24-28).

It is the examiner's opinion that the melting point determinations performed on the resulting 2-phenoxyethylbenzoic acid samples each, individually, anticipate the presently claimed drying process. This is said to be so due to the melting range disclosed, as each range includes temperatures at least one degree higher than the temperature at which melting is first observed.

Logically, these melting point determinations cannot meet the present claim limitations. A melting point determination indicates the temperature range at which a particular sample begins melting and at which the last portion of it melts. To heat a sample above its melting point requires exceeding the temperature at which the last portion of the sample melts. Bloom did not heat any samples above the temperatures disclosed as the upper value of the melting point.

Further, the present claims require *drying* the reaction product at this elevated temperature. The examiner has taken the position that loss of *any* degree of water or solvent "meets the definition of the word 'drying'" (ppr.7, p.4). In rejecting applicants' supplied definition of drying, from Hawley's Condensed Chemical Dictionary, the examiner focused on the fact that the definition was limited to removal of water, and did not allow for removal of other solvents. The examiner is correct in assuming that applicants do not wish to be limited in their definition of drying to removal of water only, however applicants likewise do not wish to be limited to the examiner's creatively

reasoned definition.

That the examiner's citation from Van Nostrand's Scientific Encyclopedia indicates the applicants' supplied definition to "sometimes" match the concept of "dehydration" is admitted. However, the entire context in which drying is discussed in that citation indicates that more solvent is to be removed in a drying process than that amount settled on by the examiner. Certainly, at least, there is nothing in the disclosure of Van Nostrand to indicate that one of skill in the art would consider a melting point determination to be a process implicating "drying" in any meaningful way.

The examiner's statement concerning the precise meaning implied by the grammatical use of the verb "to dry" (ppr.7, p.4) may very well be correct to the view of some, and indeed of many. However, the analysis is to be made with the knowledge and understanding of the skilled artisan concurrently under consideration. To suggest that scientists are not grammaticists is not the intent of the present argument, however, the skilled artisan would be most likely to understand "drying" to mean removal of a large portion of solvent from a particular sample. Bloom, itself, indicates this, as mentioned above, using the term "dried" (admittedly, the past participle) in reference to removal of the bulk of the relevant solvent through application of anhydrous sodium sulfate.

It is respectfully submitted that one of skill in the art, even while recognizing that a melting point is "really a melting range," would consider a melting point determination to be simply that, and not a process for drying a sample. Bloom teaches that the

reaction product is dried using anhydrous sodium sulfate, and does not teach that it is dried by heating it above its melting point. Bloom teaches determining the melting point of the reaction product, but does not teach heating the reaction product above this melting point. Accordingly, applicants are unable to agree with the examiner in his conclusion that Bloom teaches a process in which phenoxyethylbenzoic acids are dried at a temperature from 1 to 25°C above their melting point. For this reason, applicants respectfully request that the rejection of claims 1-4 as anticipated by Bloom be withdrawn.

REJECTION UNDER 35 USC §112, ¶2

In the most recent office action, the examiner has newly rejected claims 1-4 under 35 USC §112, ¶2 as being indefinite. This rejection is based on teachings found in the earlier-cited Zubrick reference, and questions whether the 1 to 25°C increase in temperature is to be taken from the lower or upper value of the “melting point range” (ppr.12, p.4). In addition, if the claim language is directed to that melting point which would be observed where the compound is 100% pure, the examiner asserts that one of skill in the art would need to know the melting point in advance of performing the claimed process. Given that many of the recited compounds are unknown, the examiner argues that one of skill in the art would not know the appropriate temperature above which the drying must take place. Finally, the examiner asserts that a mixture of phenoxyethylbenzoic acids would pose yet another challenge to one of skill in the art,

in terms of knowing the temperature at which the drying should take place.

Applicants respectfully submit that the examiner's concerns on these points are unnecessary. It is indeed applicants' intention that the relevant melting point be that at which the pure product would melt - as such is the more commonly accepted definition among those of ordinary skill in the art (see, e.g., Hawley's Condensed Chemical Dictionary, p.707, attached). Given this commonly accepted definition, one of skill in the art would recognize that even a compound with an unknown melting point nevertheless does have such a melting point. A heterogeneous mixture, if produced, would also have a relevant melting point. Accordingly, the metes and bounds of the claims are clear.

The examiner's point concerning the melting points of unknown compounds bears more relevance toward enablement than indefiniteness. However, purification processes and melting point determinations are matters of routine for the appropriately skilled artisan. Accordingly, the examiner's concerns on these points would likewise be unnecessary. For all of these reasons, applicants respectfully submit that the present claims are not indefinite under 35 USC §112, ¶2.

### CONCLUSION

The present claims describe a novel and unobvious process for drying phenoxymethylbenzoic acids at a temperature from 1 to 25°C above their melting point. Bloom et al. does not disclose this process. Further, the claims are not indefinite in



their recitation of this process. Accordingly, applicants request that the rejections of record be withdrawn, and that the application be returned to the examiner for further prosecution on the merits.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

KEIL & WEINKAUF

A handwritten signature in black ink, appearing to read 'David C. Liechty', with a long horizontal flourish extending to the right.

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